



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,573	12/26/2001	Sung Hun Kim	P67462US0	7944
43569	7590	12/02/2005	EXAMINER	
MAYER, BROWN, ROWE & MAW LLP 1909 K STREET, N.W. WASHINGTON, DC 20006			VU, TUAN A	
			ART UNIT	PAPER NUMBER
			2193	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/025,573	Applicant(s) KIM ET AL.	
	Examiner Tuan A. Vu	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20011226; 20050516</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed 12/26/2001.

Claims 1-14 have been submitted for examination.

Information Disclosure Statement

2. The information disclosure statement (PTO-1449) filed 12/26/2001 and 5/16/2005 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

The items listed therein (i.e. documents numbered respectively, 2000-54639; 7-230393; 2001-168881, all in un-translated Japanese) will be marked with the abbreviated 'NC' for 'not considered'.

Claims Objections

3. Claim 8, 12, 13, and 14 are objected to for minor improprieties as follows: (i) the acronyms such as *BT*, *BTA* are to be spelled out at least once because the claims should be initially self-contained in terms of acronyms being recited, that is, the specifics of the specifications should not be read into the claims; (ii) the term 'informations' (line 2) in claim 12 needs to be corrected to be stated in singular form.

Correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2193

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The reciting of 'in response to the cross development information to execute a remote debugging about the program execution results', as found in lines 11-12, does not seem to convey a reasonable teaching enabling one skill in the art to be able to easily construe a limitation as expected from the context of the claim as a whole. More simply put, what appears to be obscure is 'information' to execute a debugging 'about the program execution results'. This incongruous put limitation language does not convey what is or responsible for executing the operation of debugging in light of the scope and context being conveyed by the debugging execution and 'information ... about the program results' and the earlier recited 'receiving program execution result information from ... target board'. In light of the disclosure, the claim limitation will be treated as broadly as possible close to the scenario wherein the response is to the debugging using the cross development information.

Correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 4, 7, 9 and 11-12 are rejected under 35 U.S.C. 103(a) as being anticipated by Heatlie, USPN: 6,633,876 (hereinafter Heatlie).

As per claim 1, Heatlie discloses a method for cross development via wireless communication in a host computer (e.g. system 101 – Fig. 1) which communicates with a target board having a microprocessor to execute cross development to a program of the microprocessor, the method comprising the following steps of:

requesting a permission (Fig. 3 – Note: security Policy to execute remote code reads on permission request being allowed for occupancy of target processor)to occupy the microprocessor from the target board (Note: a target microprocessor having inherent hardware circuit board to embed processing devices or communication devices – like network card - and I/O devices read on target board) via a wireless network (e.g. *wireless* – col. 3, lines 13-29);

if a message allowing occupancy of the microprocessor is received from the target board in response to the request, transmitting information for cross development to the target board (e.g. Fig. 2-3; col. 3, lines 48-54 – Note: security Policy to execute remote code reads on permission being allowed for occupancy of target processor) via the wireless network (e.g. *personal organizer, wireless* – col. 3, lines 13-29); and

receiving program execution result information (e.g. step 512 – Fig. 5) from the target board in response to the cross development information to execute a remote debugging about the program execution results.

As per claim 4, Heatlie discloses a method for cross development via wireless communication (e.g. *wireless* – col. 3, lines 13-29) in a target board which has an embedded

Art Unit: 2193

microprocessor and communicates with at least one host computer (system 101 – Fig. 1) to execute cross development to a program of the microprocessor, the method comprising the following steps of:

receiving a signal requesting a permission to occupy the microprocessor from the target board via a wireless network; and if the microprocessor is occupiable (e.g. Fig. 3 -Note: security Policy to execute remote code reads on permission request being allowed for occupancy of target processor, i.e. judging whether the microprocessor is occupiable in response to the signal), transmitting an occupancy-permitting message to the host computer which requested the permission;

receiving information transmitted from the host computer for executing cross development via the wireless network (e.g. Fig. 2; col. 3, lines 30-51), in response to the occupancy-permitting message; and

executing the program according to the information for cross development and transmitting execution result (step 512 - Fig. 5) information to the host computer via the wireless network for remote debugging about execution results.

As per claim 7, this claim is a system corresponding to claim 4 comprising means for requesting (a permission to occupy); judging (whether the microprocessor is occupiable); for wirelessly communicating information for cross development with the target board, if the microprocessor is occupiable; and means for (executing remote debugging); all of which having been addressed in claim 4, respectively.

As per claim 9, Heatlie discloses a cross development system of a target board via wireless communication which communicates with at least one host computer (system 101 – Fig.

Art Unit: 2193

1) to execute cross development to a program of a microprocessor embedded in the target board, the system comprising means for:

judging whether the microprocessor is occupiable in response to an occupancy-request signal about the microprocessor received from the host computer (e.g. Fig. 3; col. 3, lines 30-51 - Note: security Policy to execute remote code reads on permission request being allowed for occupancy of target processor, i.e. judging whether the microprocessor is occupiable in response to the signal);

wirelessly communicating (*wireless* – col. 3, lines 13-29) information for executing cross development with the host computer, which sent the occupancy-request signal, if the microprocessor is occupiable (Fig. 2-3 - Note: security Policy to execute remote code reads on permission request being allowed for occupancy of target processor, i.e. judging whether the microprocessor is occupiable in response to the signal); and

executing a corresponding program in response to the received information to execute cross development.

As per claim 11, Heatlie discloses a data transceiver system for executing program cross development of a target board using at least one host computer, comprising:

a first wireless communication (e.g. *personal organizer, wireless* – col. 3, lines 13-29) block loaded on the host computer (system 101 – Fig. 1) for wirelessly transmitting first information (Fig. 2) for cross development of the target board to the target board and receiving second information (e.g. step 512 – Fig. 5) corresponding to the first information from the target board;

and a second wireless communication block loaded on the target board for sending third information about application program (Fig. 3; col. 4 lines 24-33 – Note: security constraints allowing failure detection communicated between debugging host computer and target machine reads on information about application program) and debugging execution (col. 4, lines 1-11; col. 3, lines 44-51) transmitted from the host computer to the target board and sending execution results (step 512 – Fig. 5) to the first wireless communication block.

As per claim 12, Heatlie discloses a data transceiver system for executing program cross development of a target board in accordance with claim 11, wherein the information contain at least one of a group including a compiled application program information (step 210 – Fig. 2), a microprocessor and a program debugging information (step 512 – Fig. 5).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-3, 5-6, 8, 10, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heatlie, USPN: 6,633,876 (hereinafter Heatlie) in view of Comeau et al., USPubN: 2002/0099863 (hereinafter Comeau); further in view of Beutel, “Bluetooth – An adequate Solution for local Ad-hoc Networking?”, April 2 , 2001,*Computer Engineering and Networks Lab*, ETH Zurich (hereinafter Beutel)

As per claims 2 and 3, Heatlie does not explicitly disclose that the wireless network is a Bluetooth network such as in a Piconet network. Analogous to Heatlie’s using of a host computer

Art Unit: 2193

to debug a target computer being a wireless network device and cross platform use of JVM to execute downloaded debug code (see Heatlie: col. 3, li. 44-54), Comeau also discloses host machine to support code distribution in a wireless using a bluetooth interface (Bluetooth 116 – Fig. 1-2). At the time the invention was made, Bluetooth in a master slave network such as Piconet was a known concept such as exemplified by Beutel (see Beutel - pg. 1-12) to promote non-centralized Ad-hoc propagating master-slave distribution. It would have been obvious to implement the wireless debugging method by Heatlie at the time the invention was made, so that the wireless distribution uses Bluetooth such as Comeau and that such Bluetooth is implemented in the Ad-hoc topology as by Beutel to enable non-dependency of cross platform distribution of debug code as intended by Heatlie's wireless application.

As per claims 5-6, these claims include the limitations as recited in claims 2-3, respectively, hence incorporate the rejection as set forth therein.

As per claim 8, the communicating means is a BT module has been addressed in claim 2 above.

As per claim 10, the communicating means is a Bluetooth network has been addressed in claim 2-3 above.

As per claims 13-14, these claims include the limitations as recited in claims 2-3, respectively, hence incorporate the rejection as set forth therein.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

Art Unit: 2193

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571)272-3719.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence – please consult Examiner before using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan Vu

Patent Examiner

Art unit 2193

November 14,2005